

Range extension of the Millewa Skink *Hemiergis millewae* in the Murray-Sunset National Park, Victoria.

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Abstract

This article reports a range extension for the critically endangered Millewa Skink *Hemiergis millewae* in Victoria. An individual *H. millewae* was found approximately 85 km east of its former known range in mature mallee vegetation, near the eastern edge of the Murray-Sunset National Park on 27 March 2007. Site characteristics are described, and a list of other reptile species found at the same site is provided. Further research into the habitat associations and distribution of *H. millewae* is recommended in order to guide the management of this species. (*The Victorian Naturalist* 125 (4) 2008, 110-113)

Introduction

The Millewa Skink *Hemiergis millewae* is a small, thigmothermic skink (snout-vent length 58 mm) that occurs in mallee vegetation of southern Australia (Cogger 1989; Swan and Watharow 2005). *Hemiergis millewae* has a disjunct distribution, with isolated populations known from southern Western Australia, south-central South Australia and south-eastern South Australia extending into north-western Victoria (Cogger 2000; Wilson and Swan 2003).

Cogger (1989) notes that *H. millewae* is one of seven species of reptiles with a distribution essentially limited to mallee eucalypt environments in Australia. In Victoria, *Hemiergis millewae* is listed as critically endangered owing to its limited distribution (DSE 2003b). To date, the species is known from 62 records in Victoria (Museum Victoria 2007) confined to a small area in the far western edge of the Murray-Sunset National Park (Fig. 1) (Swan and Watharow 2005).

Information on this species is scarce. Field-guides report the habitat of *H. millewae* as 'Spinifex [*Triodia scariosa*] clumps with a litter build up' (Swan and Watharow 2005). Robertson *et al.* (1989) suggested that large clumps of *Triodia* (Fig. 2) offer the species a suitable microclimate without which it would be unlikely to survive. *Hemiergis millewae* also is reported to depend on *Triodia* for food (Robertson *et al.* 1989), preying mainly on invertebrates which inhabit clumps

(Coventry 1976; Swan and Watharow 2005). A reliance on large clumps of *Triodia* may explain why the species has not been recorded in early post-fire seral stages, which generally lack this resource (Robertson *et al.* 1989, Noble and Vines 1993). As a consequence of its association with mature mallee vegetation, combined with a highly localised distribution and perceived low vagility (Robertson *et al.* 1989), *H. millewae* is believed to be at risk of severe wildfire (Robertson *et al.* 1989; DSE 2003a; Swan and Watharow 2005).

Species record

On 27 March 2007, as part of a major project investigating the response of fauna to fire regimes in the Murray mallee region, we trapped an individual of *H. millewae* on the eastern edge of the Murray-Sunset National Park. This record is approximately 85 km east of the known range, and hence represents a significant range extension for this threatened species in the state of Victoria.

The individual (Fig. 3) was captured in a 20-litre pitfall trap, one of 10 pitfall traps spaced at 5 m intervals along a 50 m drift fence at the site. Pitfall traps at this site had been opened for five nights during November 2006 (with no records of *H. millewae*), and five nights in March 2007 when the record was obtained.

Other reptile species trapped at this site include: Nobbi Dragon *Amphibolurus nobbi coggeri*, Mallee Dragon *Ctenophorus fordi*,

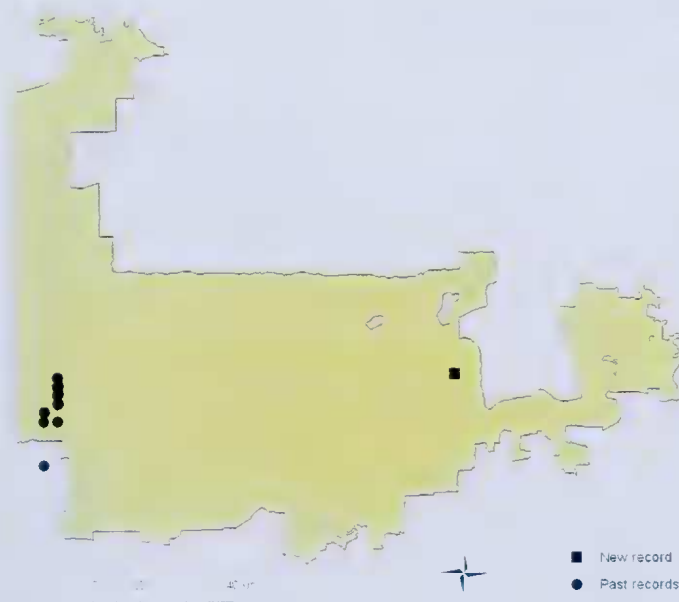


Fig. 1. Distribution map of the Millewa Skink, *Hemiergis millewae* in Victoria, including past records (represented as circles) and the current record (represented as a square)



Fig. 2. Large clump of *Triodia scariosa* at the site from which the individual was captured.

Painted Dragon *Ctenophorus pictus*, Central Bearded Dragon *Pogona vitticeps*, Murray Striped Skink *Ctenotus brachyonyx*, Regal Striped Skink *Ctenotus regius*, Bougainville's Skink *Lerista bougainvillii*, Spotted Burrowing Skink *Lerista punctatovittata*, Common Scaly-foot *Pygopus lepidopodus*, Southern Legless Lizard *Delma australis* and Beaded Gecko *Diplodactylus damaeus*.

The site was on a dune with a canopy 2-3 m high composed of Dumosa Mallee *Eucalyptus dumosa*, Slender-leaf Mallee *E. leptophylla* and Yellow Mallee *E. costata*, and a shrub layer composed of Stiff Westringia *Westringia rigida*, Mallee Tea-tree *Leptospermum coriaceum*, Small Cooba *Acacia ligulata* and Dwarf Nealie *A. wilhelmiana*. The vegetation generally was open with a patchy shrub layer (Fig 4). The ground cover (measured by a line-transect) was predominantly leaf litter (58.7%), but also included bare ground (8.1%), cryptogamic crust (21.5%), and *Triodia scariosa* (10.5%) (Fig 2). The soil type was loamy sands. Satellite imagery indicates that the site has not been burnt since 1977.

This record is consistent with past records of *H. millewae* in mature mallee vegetation (Robertson *et al.* 1989; Foulkes and Gillen 2000). However, uncertainty remains as to whether this record constitutes a distinct population, or is part of a larger, patchy population continuous with the known populations in the western Sunset Country.

More information on the distribution and habitat associations of *H. millewae* is required in order to make informed management decisions for the species' conservation. As such, research into the ecological requirements of *H. millewae* is highly recommended.

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Fig. 3. The individual Millewa Skink *Hemiergis millewae* captured near the eastern edge of the Murray-Sunset National Park.



Fig. 4. Photograph of site in which the individual *Millewa Skink Hemiergis millewae* was captured.

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